

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for the electrolytic transformation of at least one furan-based starting compound (A) in an electrolysis circuit wherein the process is carried out in an electrolysis cell, the process ~~which comprises both the~~ comprising steps (i) and (ii):

(i) ~~electrolytic oxidation of~~ electrolytically oxidizing the at least one furan-based starting compound (A) ~~or a substituted furan or a mixture of two or more thereof to give~~ produce

(a) at least one alkoxyated furan compound (B) which has a C-C double bond in the five-membered heterocyclic ring, and

(b) hydrogen;

(ii) ~~hydrogenation~~ hydrogenating of this the C-C double bond using the hydrogen obtained ~~in parallel at the a cathode in step (i), or~~ hydrogen fed to the electrolysis circuit from outside or by electrocatalytic hydrogenation,

~~wherein the process is carried out in an electrolysis cell in which at least one hydrogenation catalyst is present.~~

Claim 2 (Currently Amended): A process as claimed in claim 1, ~~which proceeds in an undivided~~ wherein the electrolysis cell is an undivided electrolysis cell.

Claim 3 (Currently Amended): A process as claimed in claim 1, wherein at least one electrode is in contact with the at least one hydrogenation catalyst, ~~in particular with a noble metal.~~

Claim 4 (Currently Amended): A process as claimed in claim 3, ~~wherein further~~
comprising applying the hydrogenation catalyst ~~in particular the noble metal, has been~~
applied to a graphite felt.

Claim 5 (Currently Amended): A process as claimed in claim 3, ~~wherein further~~
comprising washing the hydrogenation catalyst ~~has been washed~~ onto the at least one
electrode.

Claim 6 (Currently Amended): A process as claimed in claim 3, wherein the
hydrogenation catalyst is ~~brought~~ in the form of a suspension ~~into contact with the at least one~~
electrode.

Claim 7 (Original): A process as claimed in claim 1, wherein at least one of the
electrodes used is a gas diffusion electrode.

Claim 8 (Original): A process as claimed in claim 1, wherein at least one of the
electrodes used is a composite comprising at least one conventional electrode material and at
least one material for a gas diffusion electrode.

Claim 9 (Original): A process as claimed in claim 8, wherein the conventional
electrode material comprises carbon.

Claim 10 (Currently Amended): A process as claimed in claim 3, wherein the at least
one electrode which is in contact with a the hydrogenation catalyst is used as cathode or as
anode or as cathode and anode.

Claim 11 (Currently Amended): A process as claimed in claim 1, wherein the at least one alkoxyated furan compound (B) produced in step (i) is reacted in step (ii) to form at least one ring-opened butane derivative.

Claim 12 (Original): A process as claimed in claim 11, wherein the ring-opened butane derivative is 1,1,4,4-tetramethoxybutane or a substituted 1,1,4,4-tetramethoxybutane.

Claim 13 (Currently Amended): A process as claimed in claim 2, wherein at least one electrode is in contact with the at least one hydrogenation catalyst, ~~in particular with a noble metal~~.

Claim 14 (Currently Amended): A process as claimed in claim 4, wherein the at least one electrode which is in contact with a the hydrogenation catalyst is used as the cathode or as an anode or as the cathode and the anode.

Claim 15 (Currently Amended): A process as claimed in claim 5, wherein the at least one electrode which is in contact with a the hydrogenation catalyst is used as the cathode or as an anode or as the cathode and the anode.

Claim 16 (Currently Amended): A process as claimed in claim 6, wherein the at least one electrode which is in contact with a the hydrogenation catalyst is used as the cathode or as an anode or as the cathode and the anode.

Claim 17 (Currently Amended): A process as claimed in claim 7, wherein ~~the~~ at least one electrode ~~which~~ is in contact with a hydrogenation catalyst and is used as the cathode or as an anode or as the cathode and the anode.

Claim 18 (Currently Amended): A process as claimed in claim 8, wherein the at least one electrode ~~which~~ is in contact with a hydrogenation catalyst and is used as the cathode or as an anode or as the cathode and the anode.

Claim 19 (Currently Amended): A process as claimed in claim 9, wherein ~~the~~ at least one electrode ~~which~~ is in contact with a hydrogenation catalyst and is used as the cathode or as an anode or as the cathode and the anode.

Claim 20 (Currently Amended): A process as claimed in claim 13, wherein the at least one electrode which is in contact with a the hydrogenation catalyst is used as the cathode or as an anode or as the cathode and the anode.

Claim 21 (New): A process as claimed in claim 13, wherein the hydrogenation catalyst comprises a noble gas.

Claim 22 (New): A process as claimed in claim 3, wherein the hydrogenation catalyst comprises a noble gas.